IN THE ABSTRACT

Replace the abstract originally provided on page 47 of the application with the new abstract as follows. A new abstract numbered page 47 is enclosed for the last page of the application following the claims.

ABSTRACT OF THE DISCLOSURE

The present invention relates to a semiconductor optoelectronic waveguide having a nin-type hetero structure which is able to stably operate an optical modulator. On the upper and lower surfaces of the core layer determined for the structure so that electro-optical effects are effectively exerted at an operating light wavelength and are provided with intermediate clad layers having a band gap which is greater than that of the core layer 11. Respectively on the upper and the lower surface of the intermediate clad layer are provided the clad layers having the band gap which is greater than those of the intermediate clad layers. On the upper surface of the clad layer are sequentially laminated a p-type layer and an n-type layer. In the applied voltage range used under an operating state, a whole region of the p-type layer and a part or a whole region of the n-type layer are depleted.

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